

**Notice of Allowability**

Application No.

10/604,834

Examiner

Khanh Tran

Applicant(s)

CHEN ET AL.

Art Unit

2611

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Application filed on 08/20/2003.
2. ☒ The allowed claim(s) is/are 1-9.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |                                                                                                            |                                                                                       |
|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|                                                                                                            | 9. <input type="checkbox"/> Other _____                                               |

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Regarding claim 5, in line 5, "utilizingreal" has been changed to -- utilizing real --.

Regarding claim 7, in line 1, "systemfor" has been changed to -- system for --; in line 8, "(FFT)moduleelectrically" has been changed to -- (FFT) module electrically --.

### ***Reasons for Allowance***

The following is an examiner's statement of reasons for allowance:

2. Regarding claim 1, claim is allowable over prior art of record because claim is directed to a method for detecting a periodic signal in a communication system in which claim identifies the uniquely distinct features "quantizing at least two symbols of the frequency domain digitized signal to obtain quantization information" and "utilizing the quantization information to compute a detection metric for periodic signal detection".

The closest prior art, McClennon et al. U.S. Patent 6,721,355 B1 disclosing a method

Art Unit: 2611

and apparatus for monitoring a data traffic to determine its periodicity, either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

3. Regarding claim 7, claim is allowable over prior art of record because claim is directed to a periodic signal detection system for an OFDM or a DMT communication system in which claim identifies the uniquely distinct features of a periodic signal detector comprising "a quantizer electrically connected to the FFT module for quantizing symbols of the frequency domain digital signal of the FFT module; a sign correlator electrically connected to the quantizer for performing a predetermined correlation to generate a detection metric for periodic signal detection; and a sign memory electrically connected to the quantizer and the sign correlator for providing sign information obtained from the quantizer to the sign correlator". The closest prior art, McClennon et al. U.S. Patent 6,721,355 B1 disclosing a method and apparatus for monitoring a data traffic to determine its periodicity, either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

McClennon et al. U.S. Patent 6,721,355 B1 discloses "Method And Apparatus For Adaptive Power Management In A Modem".

Jong U.S. Patent 6,408,696 B1 discloses "Coherent Phase Line Enhancer Spectral Analysis Technique".

Okuda U.S. Patent 6,735,303 B1 discloses "Periodic Signal Detector".

Huber et al. Jong U.S. Patent 6,408,696 B1 discloses "Coherent Phase Line Enhancer Spectral Analysis Technique".

Huber et al. U.S. Patent 6,618,452 B1 discloses "Burst Carrier Frequency Synchronization And Iterative Frequency-Domain Frame Synchronization For OFDM".

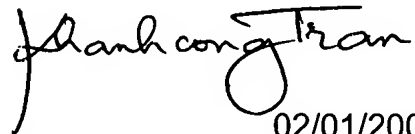
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Tran, whose telephone number is 571-272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2611

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCT

A handwritten signature in black ink, appearing to read "Khanh Tran", with a stylized flourish at the end.

02/01/2007

Khanh Tran

Primary Examiner, AU 2611